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10/050,291	01/16/2002	Ronald J. Wolf	WOR0001.CIP	9107

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[REDACTED] EXAMINER

STRECKER, GERARD R

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2862

DATE MAILED: 05/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 10/050,291	Applicant(s) WOLF
Examiner G.R. STRECKER	Group Art Unit 2862

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

Responsive to communication(s) filed on 4/11/03

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

Claim(s) 1-17 is/are pending in the application.

Of the above claim(s) 4, 10 and 15 is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-3, 5-9, 11-14, 16 and 17 is/are rejected.

Claim(s) _____ is/are objected to.

Claim(s) _____ are subject to restriction or election requirement

Application Papers

The proposed drawing correction, filed on _____ is approved disapproved.

The drawing(s) filed on _____ is/are objected to by the Examiner

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

All Some* None of the:

Certified copies of the priority documents have been received.

Certified copies of the priority documents have been received in Application No. _____.

Copies of the certified copies of the priority documents have been received
in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

Information Disclosure Statement(s), PTO-1449, Paper No(s). 6 Interview Summary, PTO-413

Notice of Reference(s) Cited, PTO-892 Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948 Other _____

Office Action Summary

Art Unit: 2862

Applicant's election without traverse of the species of Group I (claims 1-3, 5-9, 11-14, 16 and 17) in Paper No. 8 is acknowledged.

Claims 4, 10 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 8.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plural assemblies of claim 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The disclosure is objected to because of the following informalities: At page 7, line 20, "ay" should be ---may---. On page 8; at line 20, "directin" should be ---direction---. The sentence beginning at line 31 does not make sense with respect to the position and arrows. At page 9, line 23, plates 12" are shown as 12" in Figs. 29 and 30. On page 10; at line 17, "Hal" should be ---Hall---. The sentence beginning at line 19 does not make sense. At page 14, line 16, "12, 1" is not understood.

Appropriate correction is required.

Art Unit: 2862

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujiwara et al (4,810,965, cited in applicant's IDS).

Fujiwara et al discloses (Figs. 12, 13) a position sensor, comprising: two magnets (31, 32); a flat ferrous plate 34, having said two magnets located at spaced locations along said plate, and oriented such that one magnet's north pole is directed toward said plate and one magnet's south pole is directed toward said plate; and a magnetic responsive device 15, located proximate said plate.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al, discussed above.

Art Unit: 2862

Although the magnetic flux responsive means 15 of Fujiwara et al is disclosed as comprising a magneto resistive sensing device rather than a Hall effect device as claimed, it would have been obvious to substitute a Hall effect device for the magneto resistive device of Fujiwara et al, since it is well known in the art that Hall effect sensors and magnetoresistive sensors are, in most instances, interchangeable as magnetic flux responsive devices, in position sensors.

Claims 1-3, 5, 6 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Duesler et al (6,211,668).

With respect to claims 5, 6 and 17, Duesler et al discloses (Figs. 3-5) a position sensor, comprising: four magnets (321-324); first and second ferrous plates (301, 302), the plates and magnets being arranged as recited in the claims; and a Hall effect magnetic flux responsive device (575) disposed between the plates. Claim 1-3 are anticipated by either one of the plates and associated pair of magnets of Duesler et al. Although mentioned specifically for valve position sensing, the position sensor would be inherently adaptable for use with any of the structures recited in claim 17.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duesler et al. It would have been obvious to one skilled in the art to incorporate a plurality of the arrangements of magnetic plates, magnets and flux responsive devices of Duesler et al as part of a position sensor, to provide redundant measurements, or to measure the positions of different elements.

Claims 5-9, 11-14 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

Art Unit: 2862

applicant regards as the invention. In claim 5, it is not clear what magnetic flux the magnetic flux is responsive to. In claim 7, it is not clear in what way the magnetic shunt is "proximate" at least two of the magnets, which two magnets it is proximate to and what is being shunted. In claim 8, it is not clear where the air gaps are located with respect to the magnets and what function the air gaps perform. In claim 9, it is not clear how the plurality of assemblies structurally cooperate and are related to the structure recited in claim 5. In claim 11, it is not clear how the first and second magnets are supported. At lines 10 and 11, it is not clear what magnetic flux the magnetic flux responsive device is responsive to. In claim 13, it is not clear in what way the magnetic shunt is proximate one of the two magnets and what is being shunted.

Pfaffenberger et al is made of record to show a position sensor with plates, magnets and flux sensor.

Any inquiry concerning this communication should be directed to G. R. Strecker at telephone number 305-4937.

Strecker/ek

04/30/03

Gerard R. Strecker
GERARD R. STRECKER
PRIMARY EXAMINER